

# Notice of Allowability

Application No.

09/902,696

Examiner

Kaveh Abrishamkar

Applicant(s)

MURATANI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment received on September 18, 2006.
2. ☒ The allowed claim(s) is/are 1-3 and 6-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

AYAZ SHEIKH

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### **DETAILED ACTION**

1. This action is in response to the amendment filed on September 18, 2006.  
Claims 1-3, and 6-26 are currently pending.

### **REASONS FOR ALLOWANCE**

2. Claims 1-3, and 6-26 are allowed.
3. The following is an Examiner's statement of reason for allowance:  
  
The above mentioned claims are allowable over prior arts because the Cited Prior Art (CPA) of record fails to teach or render obvious the claimed limitations as recited in the independent claims 1, 11, 13, 15, 16, 17, 18, and subsequent dependent claims.
4. The CPA, Shimizu (European Patent Application EP0982895), does not teach or suggest a an encryption or decryption apparatus, an expanded key generation apparatus or method used for encryption or decryption, or an article of manufacture comprising a computer usable medium used for encryption or decryption, wherein a plurality of expanded keys are used in either a predetermined order (for encryption) or a reversed order (for decryption), wherein a plurality of round processing circuits are used, wherein the stages comprise a first portion including at least two round processing circuits having a first and second round functions and a second portion which follows the first portion, the second portion including at least two round

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processing circuits having third and fourth round functions, the third round function being an inverse of the second round function, and the fourth round function being an inverse of the first round function.

5. The CPA teaches a cryptographic data processor which includes a plurality of key conversion functions sequentially connected, wherein each of the functions are of an involution type (where an inverse of the function is the function). However, with respect to the Applicant's arguments that state that Shimizu states that the involution function is a bi-directional function, and the conversion and the reverse connection are the same, the CPA does not teach the disclosed invention.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaveh Abrishamkar whose telephone number is 571-272-3786. The examiner can normally be reached on Monday thru Friday 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAK.A.

12/05/2006

  
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